AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): An immunogenic complex comprising:

gp120 covalently bonded to a fragment of CD4 or an equivalent thereof;

wherein a fragment of CD4 includes either the first domain of CD4, the second domain of CD4, both the first and second domains of CD4, or a combination of the first or second domain of CD4 and the third or fourth domain of CD4; and

wherein an equivalent of a fragment of CD4 is any molecule that mimics the conformation of any fragment of CD4 and which can bind to gp120.

Claim 2 (original): The immunogenic complex of claim 1 wherein said fragment of CD4 comprises the first and second domains of CD4.

Claim 3 (original): The immunogenic complex of claim 1 wherein cryptic epitopes are revealed.

Claim 4 (original): The immunogenic complex of claim 1 wherein said gp120 is covalently cross-linked to said fragment of CD4.

Claim 5 (original): A composition comprising the immunogenic complex of claim 1.

Claim 6 (original): The composition of Claim 5 further comprising an adjuvant composed of aluminum phosphate gel.

Claim 7 (original): A composition comprising the immunogenic complex of Claim 1 and a pharmaceutically acceptable carrier.

Claim 8 (withdrawn): An antibody reactive with the immunogenic complex of Claim 1.

Claim 9 (withdrawn): The antibody of Claim 8, which is a monoclonal antibody.

Claim 10 (withdrawn): An immortalized cell line that produces an antibody as recited in Claim 9.

Claim 11 (withdrawn): A method of raising neutralizing antibodies against HIV, comprising administering to a subject an immunogenically effective amount of a complex of gp120 covalently bonded to a fragment of CD4 or an equivalent thereof in a pharmaceutically acceptable carrier.

Claim 12 (withdrawn): The method of Claim 11 wherein the fragment of CD4 comprises the first and second domains of CD4.

Claim 13 (withdrawn): A method for the detection of HIV antigen in a test fluid, comprising contacting the test fluid with an antibody raised against an immunogenic complex of gp120 covalently bonded to a fragment of CD4 or an equivalent thereof, and detecting the presence of immune complexes formed between antigen in the test fluid and said antibody.

Claim 14 (withdrawn): A test kit for conducting the method of Claim 13, comprising said antibody that is bound to a solid substrate or labelled and instructions for performing the detection method.

Claim 15 (currently amended): A ~~vaccine~~ composition for use in immunotherapy comprising:

an immunogenically effective amount of a complex of gp120 covalently bonded to a fragment of CD4 or an equivalent thereof in a pharmaceutically acceptable medium;

wherein a fragment of CD4 includes either the first domain of CD4, the second domain of CD4, both the first and second domains of CD4, or a combination of the first or second domain of CD4 and the third or fourth domain of CD4; and

wherein an equivalent of a fragment of CD4 is any molecule that mimics the conformation of any fragment of CD4 and which can bind to gp120.

Claim 16 (withdrawn): An immunogenic complex comprising gp120 covalently bonded to a CD4 equivalent molecule.

Claim 17 (withdrawn): The immunogenic complex of Claim 16 wherein cryptic epitopes are revealed.

Claim 18 (withdrawn): The immunogenic complex of Claim 16 wherein said CD4 equivalent molecule is a scorpion toxin-based CD4 mimetic miniprotein.

Claim 19 (withdrawn): The immunogenic complex of Claim 16 wherein said gp120 is covalently cross-linked to said CD4 equivalent molecule.

Claim 20 (withdrawn): A method of raising neutralizing antibodies against HIV, comprising administering to a subject an immunogenically effective amount of a complex of gp120 covalently bonded to a CD4 equivalent molecule in a pharmaceutically acceptable carrier.

Claim 21 (previously presented): The composition of claim 7;

wherein the composition is a vaccine.